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ABSTRACT

Papers on serials and their bibliographic control, which were presented at the 1983 International Federation of Library Associations (IFLA) conference, include: (1) "ISDS [International Serials Data System] and the National Bibliography," in which Ross Bourne (United Kingdom) describes ISDS development, the distinctive features of serials in bibliographic terms, and the differences between ISDS records and those created under the auspices of the International Standard Book Description for Serial Publications; (2) "Automated Serials Check-in System in the European University Institute of Florence," in which Brigitte Graffin and Corrado Pettenati (Italy) describe ordering, check-in, claiming, and other operations in this institute's automated serials control system; (3) "A Methodology for the Evaluation of Serials Control Systems," an outline by J. E. Rush and R. S. Tannehill of an eight-phase methodology for evaluating serials control systems, particularly online systems, as part of formal and informal procurement processes; and (4) "Etude sur le Traitement des Publications en Serie par les Centres ISDS et les Agences Bibliographiques Nationales" (Study on the Processing of Serial Publications by the ISDS Centers and National Library Agencies), a summary (in French) by Christine Girard (France) of a publication which describes a 3-year study of the relationship between ISDS centers and national libraries in the serial cataloging process, based on findings from a questionnaire sent to institutions in 47 countries. (ESR)

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General Conference, Munich, West Germany, August 21-27, 1983

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ISDS AND THE NATIONAL BIBLIOGRAPHY

Ross BOURNE

The British Library

London, United Kingdom

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ISDS AND THE NATIONAL BIBLIOGRAPHY

Ross Bourne

ISDS - The International Serials Data System - results from an initiative of Unesco and the International Council of Scientific Unions Abstracting Board (ICSU-AB) and was originally designed to be a register of the world's scientific and technical journals, uniquely identifying those journals with key-titles and International Standard Serial Numbers (ISSN). This original concept has since been expanded to cover all types of serial publication in all areas of knowledge while at the same time the unique identifiers referred to above are now augmented with other information such as imprint details of related titles, etc. The register is held in machine-readable form and a network of national and regional centres throughout the world provide records of their national publishing activity to the ISDS International Centre in Paris; output is on COM fiche issued at regular intervals and there is potential for on-line access and for the production of sub-sets. Although ISDS records were originally intended to do no more than identify serials, they are now used as bibliographic descriptions in, for example, some union catalogues. Records are created according to operational procedures set out in the ISDS Manual¹ (formerly the Guidelines for ISDS).

At the same time, national libraries and other agencies acting as the National Bibliographic Agency create records of their country's national serial output, sometimes in conjunction with their participation in ISDS, sometimes not, and usually according to a different set of guidelines or cataloguing rules based perhaps upon other principles. In English-speaking countries, for example, the second edition of the Anglo-American Cataloguing Rules has been based upon but does not entirely correspond with the provisions of the various International Standard Bibliographic Descriptions (ISBDs), which I am sure are familiar to this audience. Doubts have been expressed within national libraries for some time about the apparent duplication of effort involved in preparing records for the same serial according to different rules and for different machine formats within the same institution. The question has been asked whether universal bibliographic control really requires what is essentially parallel cataloguing and listing of serials, albeit for different purposes. Is it sensible and indeed is it financially

justifiable to create a national bibliographic record, the definitive national record, at the same time as a record whose primary purpose is to identify a serial, but which shares many of the characteristics of the former?

We should first remind ourselves what the distinctive features of serials are, and I will spend a little time on these. It has been suggested that they are a group of similar publications issued successively, but publications to which the publisher cannot be bothered giving individual titles. That is a facetious definition but it does draw attention to the essence of a serial, which is that it consists of successive issues related not only by title but also by contents, format and editorial policy. To this definition one should add that a serial is often marketed and sold as an entity, usually on an annual basis. While monographs are generally complete in themselves - even when they extend over a number of separate physical volumes - the successive issues of a serial frequently depend upon earlier issues for full understanding. The monograph will usually gestate, in its production as well as its contents, over a relatively long period of time while a serial issue is frequently produced within weeks, possibly days. This characteristic leads to what I believe is the essential difference between the monograph and the serial, and that is the nature of communication of each, the message contained in the medium. In other words, while the monograph is generally the mature expression of its author's views, the serial presents a snapshot of its particular subject area in the form of letters, brief news items, work in progress, and so forth. That of course is a generalisation but it does emphasise the dispensability and what is more to the point the mutability of the medium. The serial changes.

In bibliographic terms this is untidy. When cataloguing monographs we know that once a record has been created, providing there are no errors, that record should not need to be changed. But this is not true of serials. I have already used the word "snapshot" in a slightly different connection, and the bibliographic record of a serial could certainly be described in this way. It is possible to provide certain generalised information about a serial in a bibliographic record, for example its title, its subject, its bibliographic history, all things which on the whole do not change (although I am quite aware, of course, that titles do change,

thereby creating the need for further bibliographic records, and that over time a serial's orientation can change as well). But practically every other bibliographic aspect of a serial can and often does change: its subtitle, its imprint, its frequency, and so forth. It should be evident, then, that if the authoritative record of a serial is to be based upon a single issue of that serial, the record can not be other than a snapshot. The alternative would be to re-create that record every time a change took place; that solution may be theoretically pure, but is both impractical and expensive.

The bibliographic record of a serial not only provides us with objective information about the publication, such as how a subscription can be obtained and what relationship it has with other publications, but also enables us to infer how useful or appropriate the serial might be for a particular purpose, for example the name of the publisher may or may not be one normally associated with the subject of the serial. A bibliographic record cannot altogether replace the actual examination of a serial but without that record one cannot gain access to the document in the first place. Bibliography, whether current or historical, must provide sufficient clues for library material to be effectively used.

I will now draw attention to another of the characteristics of a serial. Because of the nature of a serial's contents - I have said that the serial often contains items of news and ephemeral information - serials tend to be called Bulletin, Newsletter, Occasional Publications, etc. Whereas the incidence of duplication of titles amongst the monograph population is relatively small, this is by no means true of serial titles. Since a further characteristic of serials is that they become cited in articles appearing in other serials, it is clear that there must be ample opportunities for ambiguity between similar if not identical titles.

This brings us back to the purpose for which the ISDS network was established. I have no doubt that this purpose is still valid although I see little evidence that the existence of ISDS has necessarily resulted in better article citations. I should have made it clear earlier that the original orientation of ISDS was towards the abstracting and indexing community rather than towards the library community (witness the early involvement of ICSU-AB);

however, many ISDS Centres, and certainly most of the more active ones, are situated within national or other major libraries. So, although the needs of the abstracting and indexing community are borne in mind by ISDS management, it has become inevitable that the needs of librarians have predominated over those of their colleagues in the information field. This should not be regarded as a criticism of ISDS management: the reason could be that it is easier to invite librarians, who work mostly in institutions supported by public money, to participate in exercises of this kind, possibly because our friends in the information industry are working in a more competitive environment. Be that as it may: the clear evidence is that ISDS has had a greater impact on libraries than on abstracting and indexing services, although the adoption of ISO's Biblid - which used to be known as the Bibliographic Strip - could help redress the balance. I should also mention an impact ISDS is making in a quite different community, that of the retailing industry, in which the ISSN - at least in Europe - is likely to form the major component in the Bar Code being developed for the over-the-counter sale of periodicals.

So what is this clear evidence of the impact which ISDS has had on libraries?

- ISSN are important elements in automated systems whether for circulation, cataloguing or information retrieval, batch or on-line;
- ISDS requirements have been built into a number of national MARC formats and into UNIMARC, and this has resulted in the possibility that ISDS records can be stripped from fuller national bibliographic records; the Library of Congress and the National Library of Canada carry this potential in their national MARC formats;
- ISDS records are being used in union catalogues, notably NOSP (the Scandinavian union catalogue of serials) and, I believe, in the forthcoming French union catalogue;

- and more to the point, ISDS requirements are taken account of in national cataloguing codes as a result of their incorporation (albeit limited) into and the General ISBD (ISBD(G)) and the ISBD for Serial Publications (ISBD(S)).²

This is where problems arise. The primary purpose of ISDS is the identification of serials, and implicitly their differentiation from one another, while the explicit function of ISBD is bibliographic description. The difference may seem academic but is in fact a very significant one, and is well illustrated by comparing the ISDS key-title, which is unique to each serial registered by ISDS, and the ISBD title proper, which is not. A further important difference between ISDS and ISBD(S) is that there is not necessarily a one-to-one relationship between serials processed according to each system: the rules for determining when a title may be regarded as having changed are less explicit in ISBD(S) than they are in ISDS.

Nevertheless a considerable amount of effort has gone towards harmonising this and other differences in ISDS and ISBD(S), and the new ISDS Manual and the new edition of ISBD(S) will bear witness to this. The feasibility of harmonising the two procedures was studied, under Unesco sponsorship, by Mrs Dorothy Anderson, the Director of the IFLA International Office for UBC. In her study³ she made a close examination of the differences and in conjunction with the Five Year Review of the ISBDs was able to recommend how far harmonisation should go. I draw your attention to her statement there that

"in the interests of economy and efficiency there would be benefits if those elements common to the two kinds of record were recorded in the same way; or if one extended serial record could contain all the elements for description and identification required both for national needs and to serve the international system".

Hers was obviously a successful exercise but it was successful only insofar as the assumption that the needs of bibliographic description cannot be met within the ISDS framework continues to be accepted.

These parallel systems of cataloguing have usually been justified because of their differing functions. The functions I accept, but not the means to achieve them, and after all, means, not functions, cost money. We expect a catalogue record to describe the item, although as I have pointed out already a serial record can never be more than a snapshot. So why is it necessary to describe a serial to the same depth as a monograph? I would suggest that there are two particular reasons, one theoretical and one practical. The first is what seems to me to be an occupational disease amongst librarians, what in Britain is known as the 100% syndrome. This syndrome manifests itself in our collecting policies - it is satisfying, is it not, to discover a missing issue of a journal and complete a run, regardless of whether that issue has ever actually been missed or asked for - and it manifests itself in our catalogues where we vainly imagine that we can attempt to record everything, however trivial or dated, to precisely the same standard that we adopt for more significant material. It could of course be argued that if a serial is worth acquiring it is worth cataloguing, but perhaps the cataloguing process should be more closely integrated with decisions on storage: is it feasible to continue to house a journal in perpetuity? Should not a library's collection policy be geared towards satisfying immediate needs only and then making use of co-operative systems or central loan collections after a given period, say five years? If we then regard the shelf life of a journal as being limited, then perhaps the depth of our cataloguing should also be limited, confined perhaps to those elements sufficient to do no more than identify a serial and meet those needs which obviate the necessity of consulting the serial itself?

The other, practical, reason concerns the relationship of a serial collection to other collections within a library. It is self-evident that information is information regardless of the form in which it is presented, and an integrated approach, comprehending monographs, serials, conference proceedings, microforms, audio-visual material and so forth will enable the library to gain access to material from wherever that material is stored. There is nothing wrong with this approach and indeed I would recommend it for all but those libraries where the medium

really is more important than the message. But a common approach can be assumed to mean a standard approach, and a consistent approach. Standard and consistent - yes, up to a point. Names of persons and institutions, where they are used to access a file, ought to be presented consistently, or else they will misfile or be mistaken for someone or something else. Titles should be consistent where they occur in both serial and monograph records, for example in records for monographic series; But is it really important that there is a consistency of treatment in other parts of the serial record? Does it greatly matter if there are inconsistencies of treatment between one type of material and another? Is it possible that ISDS might be entrusted with the task of satisfying the reasonable needs of catalogue users as well as those hoping to identify a serial?

I have said that ISDS was originally intended to form a registry of serial publications and to enable serials of similar or identical names to be distinguished from one another. To the essential identifying elements have been added links with related serials and some descriptive elements which Mrs Anderson has recommended should be brought fully into line with the way those elements are presented in ISBD. I see no theoretical or practical difficulty why an ISDS record cannot be augmented with as much additional information as is thought necessary. Let us therefore look at the various areas of ISBD(S) and see what this means in practical terms.

Area 1: Title and statement of responsibility area

This area holds the title in the form in which it appears on the piece and the wording of the title may or may not coincide with that of the ISDS key-title. It could be argued, indeed, that the latter is sufficient and the area is redundant, since the key-title contains all essential title information. On the other hand, such elements as parallel title and statements of responsibility do give the catalogue user valuable additional information about a serial, information which a mechanically constructed key-title may not. In machine terms, the bibliographic record could carry a code which will say either that

the title proper as given is identical with the key-title, or that the key-title consists of the title proper plus certain other specified elements, leaving the machine actually to construct it. A cataloguer will instruct, the computer can construct; and where there is a difference between the title proper as given on the piece and the key-title according to ISDS procedures, the latter may be used as an access point in a sequential file.

Area 2: Edition area

This area is rarely used in ISBD(S). Where it is used, it is often an important identifying element which should form part of the ISDS key-title, in which case its presence needs to be noted in the machine code referred to immediately above.

Area 3: Numbering area

A difficult area to apply, as indeed to justify, since the style of a serial's numbering can change, while the absence of the very first issue - essential to enter the field properly - may lead to a large amount of time being spent on a relatively unimportant piece of information, quite lacking from the ISDS Manual, although the numbering of a particular issue is obviously important for purposes of bibliographic citation.

Area 4: Publication and distribution area

Mrs Anderson has recommended that ISBD(S) and ISDS be brought fully into line in this area and I would not disagree with that. Again, the place or places of publication or the start date may form part of the ISDS key-title and will need to be announced in a code. In MARC terms, it would be no great problem to distinguish between the single place of publication which was a key-title component and a single place or multiple places of publication which were not.

Area 5: Physical description area

To my mind, the most dispensable part of the record. For a dead serial, a statement of the number of volumes in which that serial has been published may or may not be as meaningful as the publication dates given in the previous area, and in

any case the number of bibliographic volumes may not coincide with the way in which a library has bound the issues. The size or the type of illustrative material is surely of little interest, although if they are thought to be valuable there can be no great difficulty in including the information.

Area 6: Series area

This area is equivalent with one of the ISDS related titles and might perhaps be combined with other information about related titles in Area 7.

Area 7: Note area

Related titles appear in this field, and Mrs Anderson has already recommended that these be cited in the form of key-title and ISSN; where no key-title yet exists the absence of an ISSN will be sufficient evidence of this fact. Other specified ISBD notes include the frequency, which in ISDS is given in coded form; this is another of those elements which may change over time and which is often difficult to keep up-to-date. Here, ISDS and ISBD(S) records share the characteristic I have already remarked on earlier, in other words that a serial record is essentially a snapshot. Still, frequency is useful information and I see no real incompatibility between the ISDS requirement for a code and the ISBD(S) requirement for the frequency to be spelled out. Other notes - and a number of possibilities exist in ISBD(S) - must be at the library's discretion.

Area 8: International Standard Serial Number and terms of availability area

The ISSN, of course, is common to both systems and needs no further comment. The terms of availability element seems an important component in a national bibliography and must be included, although its importance obviously declines after the serial has been published for some time, if it is accepted that records cannot be continuously updated.

From what I have been saying about the eight areas of ISBD(S) it should have become obvious that I am advocating one of two things, either that ISDS should in effect be substituted for ISBD(S), in other words a subset of ISBD(G), or that serials be excluded from the ISBD family altogether on the grounds that ISDS, expanded as suggested above, adequately covers serials already. It does not much matter which of these two possibilities is accepted: the basic principle is that there should be just one mode of cataloguing serials and that the ISDS framework is adequate for this purpose. Where I differ from Mrs Anderson is not so much a difference as an extension of the thinking behind her work: let us have not one record serving two purposes but a single record - period. Bibliographic agencies will only need to produce one record which will be usable in the ISDS data base, national bibliographies and indeed other library catalogues as well; and they will be given the option to select or reject certain elements. A single record a single system, will make it easier for ISDS Centres to persuade governmental bodies to provide financial support for the ISDS International Centre. One problem is that national MARC systems, and local ISDS input systems if they exist, will once again need to be modified. Another problem is that rules for determining what might be called the extent of a serial's life may need to be brought together in order to achieve the one-to-one relationship which I have mentioned earlier. Indeed, the first standard edition of ISBD(S) recommended the use of the ISDS Guidelines (as they then were) to determine where a serial starts and finishes its existence but some national cataloguing codes based on ISBD principles may need to be modified in this respect (and I would not underestimate the difficulties of moving beyond the rarified atmosphere of the ISBDs into the practicalities of national cataloguing procedures).

I have said a lot about ISDS but not a great deal about the national bibliography. This paper, however, has been implicitly directed at the compilers of national bibliographies because, as I have already said, it is the national bibliographic agencies which for the most part house national ISDS Centres; and also because they are in the most favourable position to disseminate serial records within their own country and indeed to influence directly or indirectly cataloguing

practices within their national library communities. I have stressed, perhaps more than I need have done, the problems which confront those institutions charged with the responsibility of recording their national imprint. I have suggested that a policy of selectivity may be forced upon us through financial constraints and I would go on to argue that it may even be philosophically justifiable on the grounds that as we cannot judge what our successors will want to know about a serial in 200 or 300 years time or even which serials will actually interest them, there is little point in trying to guess. We owe it to the future, rather, to serve our immediate needs first since it is the satisfaction of these needs which will enable us to demonstrate to the people who provide resources for our systems and pay our salaries how important it is to be able to gain systematic access to the publications of the world, or to use a term not unfamiliar to this audience, to achieve a measure of universal bibliographic control. What I am suggesting, indeed, is nothing less than an expansion to the functions of ISDS. I have pointed out that ISDS was initially concerned with identification. My view is that in order to make this very important role more palatable to those governments who support ISDS we must start to accept it as the single international serials file, rather than one of a number of files each serving different purposes or national user groups. Serials exist in an international environment and should be handled on an international rather than national basis. In ISDS we have the beginnings of a really universal system, a system which has survived twelve years, which has the flexibility to adapt itself to new situations, but which is still in want of full acceptance. I believe that if events move along the lines I have been discussing, acceptance will eventually result and we really will have a serials file which can be fully maintained and available for multiple uses. But let there be just one file and one set of procedures.

REFERENCES

1. ISDS manual. Paris : CIEPS. to be published shortly
2. ISBD(S). 1st standard ed. London : IFLA International Office for UBC, 1977.
3. Compatibility of bibliographic records of serials in international exchange: ISDS Manual and ISBD(S). 1983. Unesco contract 671192

IFLA
1983

IFLA GENERAL CONFERENCE MUNICH 1983

Division: Collection and Services

Section: Serial Publications

57 - SER - 2 - E

AUTOMATED SERIALS CHECK-IN SYSTEM
in
The European University Institute
of Florence

Brigitte Graffin, Librarian
Corrado Pettenati, System analyst

European University Institute, Florence

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The subsystem for periodicals control is one of the ten chapters of the automated library system at the European University Institute.

This system has been designed in successive phases, beginning in 1976, by the present director of the library : Michel Boisset. The programming and development have all been done internally by the Institute's Computer Center under the direction of Corrado Pettenati.

The complete system has been described by M. Boisset in the Bulletin des bibliothèques de France (1) and a description of the data base can be found in the working report of the 5th INTERMARC Software Group Seminar (2).

In 1981 the new version of the I.U.E.'s automated system was adopted by France's Ministry of Education and Italy's Ministry of Culture as a means of cooperation between libraries for shared cataloging and inter-library loan.

This new version developed on SEMS ' Mitra series by TITN Company has now been installed in three centers in France. System development for the National Central Library in Florence, Italy is now in progress on a Honeywell DFS7. Several additional installations are planned for 1983 and 1984.

The following presentation has been prepared by Corrado Pettenati (data base description) and Brigitte Graffin (operational description).

1) - L'automatisation à la Bibliothèque de l'Institut Universitaire Européen : dans la perspective du service bibliothécaire national italien / Boisset, Michel, in : "Bulletin des bibliothèques de France" tome 26, no 1, janvier 1981, pp 11-25.

2) - The EUI and the SNADOC systems / Pettenati, Corrado, in : Database management systems / Library systems seminar, Brussels, October 14-16, 1981, ; ed. Paula Goossens .- Brussel : Koninklijke Bibliotheek Albert I, 1982. pp 113-122.

DESCRIPTION OF THE BASIC FILES

The file system which serves the serials control operation is a subsystem of the general data base for the automation of the administration of the library as a whole.

In fact, besides serials control, the overall system for automation of the library offers the following:

- a. bibliographic control
- b. acquisitions management
- c. associated parties (other libraries, library patrons, publishers, vendors, etc.)
- d. circulation control (internal and ILL)
- e. inventory and binding
- f. accounting
- g. inquiry
- h. catalogue production

In the first transparency the four basic files of the serials subsystem are illustrated with their respective links. These are the normal links of a DBMS (data base management system) between owner and member.

A) BIBLIO

BIBLIO, or the bibliographic file makes up the core of the data base. It contains one record for each title (monograph, periodical, series, etc.) registered by the library. Access to the BIBLIO file is available through ISSN, title key, or BID number (record identifier).

Data structure:

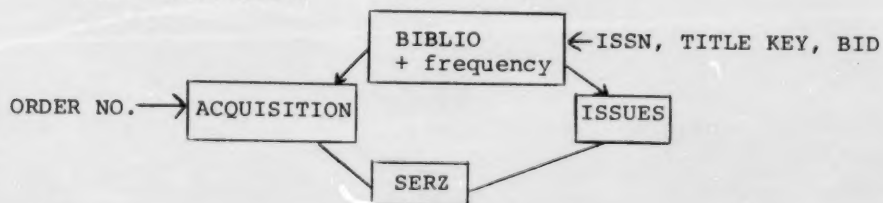


Fig. 1

The various fields in the BIBLIO records for serials include:

- country of publication
- language
- date of publication
- frequency

To each BIBLIO record is linked at least one ISBD record, which contains the full text of the bibliographic description.

B) ACQUISITION

The acquisitions file is generated from BIBLIO and generally contains as many records as there are orders in process. For current serials subscriptions the orders always remain open. If, for a single title there is more than one subscription, each order will have its own record.

The fields in the ACQUISITION file records for serials include:

- order number
- current subscription year
- vendor code for claiming (agencies and publishers)

Important links to other parts of the data base not indicated on this diagram include:

- vendor file
- budget encumbrance file
- invoice file
- STORIA, for the preparation of correspondence

C) ISSUES

This file describes the individual issues of a periodical and in this sense can be considered a natural extension of the BIBLIO file.

Each issue is described only once, and the record contains:

- volume and issue number
- date and year
- type of issue (single, combined, index, table of contents, etc.)
- notes

An important feature which serves the processing of periodicals is that the ISSUES file always includes the next issue awaited. The numbers and dates of anticipated issues are recalculated, using data from the last number received and the frequency of publication indicated in BIBLIO.

D) SERZ

This file indicates the status of each issue described in ISSUES relative to the subscription order information contained in ACQUISITION.

SERZ records include the following fields:

- status of the issue (received, awaited, missing, etc.)
- data of receipt.

Transparency no. 2 represents an example of the status of these files for a subscription title at a certain moment in time.

Sample subscription check-in record

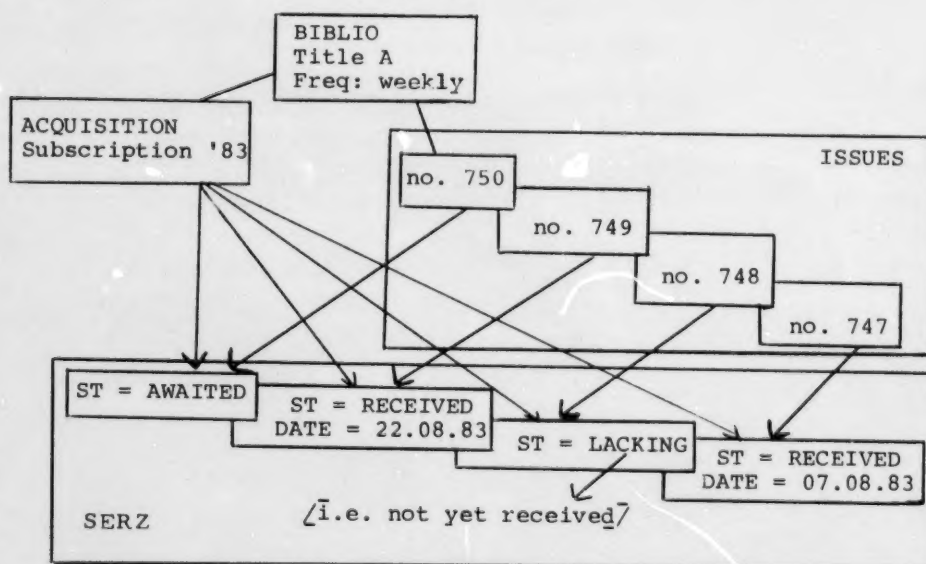


Fig. 2

The organization of the data heretofore described has proved useful for normal activities of serials management, such as checking-in and claiming. It is not sufficient, however, for describing or handling exceptional cases, such as the closing of dead subscriptions or entering of second copy subscriptions. For the processing of these special difficulties, the SERK file has been added to the files already presented, which indicates for each subscription, the issue from which any exceptional event is to begin.

The complete file structure, therefore, is that represented in transparency no. 3. The SERK file contains the same fields as ISSUES for describing individual numbers. The INV and MVT files are used for binding preparation and loans of periodical volumes respectively.

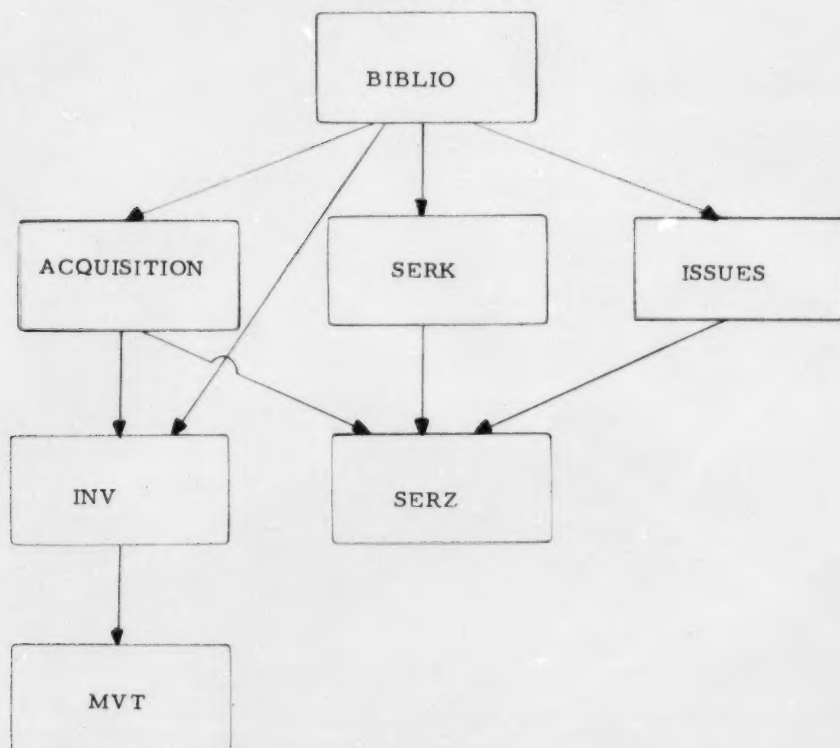


Fig. 3

II. PERIODICALS CONTROL

A. Orders

Before describing in detail checking-in and the resulting operations of claiming, catalogue updating, binding and inventory, a rapid presentation should be given of the other operations that make periodicals control possible and are indirectly linked to it.

1. Suggesting and cataloguing a subscription

At the time of order the system verifies whether the title-key⁺ input by the librarian already exists in the base, and if so displays all relevant entries. If none corresponds to the periodical to be ordered, the librarian inputs all the bibliographical information available to him, in accordance with ISBD(S)⁺⁺ cataloguing rules, whereafter passing to information of an administrative nature.

Should, however, one of the entries correspond to the periodical to be ordered, it may be re-used and corrected if necessary, and any orders attached to it be examined. After this examination, the librarian, having decided to continue the order, adds the administrative information, i.e. details on the order: year of subscription, supplier's references, supplier code -- which may be created at this point if not yet in the supplier file -- estimated price, which funds to charge, reader code of requester, plus all information on the first issue expected. The order date and description of first issue expected enable unfilled subscriptions to be claimed regularly. As soon as the subscription has been approved by the acquisitions librarian, the necessary amount is committed, the budget updated and the order form printed out and sent to the supplier. When the first issue of the

⁺ Title-key: constructed according to the OCLC-model, i.e. the first three letters of the first word plus the initial letters of the next three words.

⁺⁺ ISBD(S): International Standard Bibliographic Description for serials. 1st standard edition - London: IFLA, 1977.

subscription arrives, the operator recording the issues receives a message asking him to pass it to the cataloguing service.

The cataloger checks the bibliographical information, if necessary correcting or completing it, and not forgetting to create any possible links with other titles: previous title, supplement, parallel title etc., adding also the heading, classification number and shelf number.

2. Renewals

The librarian may at any point in the year call up the list of current subscriptions by supplier. Should he wish to cancel a subscription, he inputs its order number and the last issue due. The cancellation letter is printed out and sent to the supplier. At the end of the year, or on request, he has the list of subscriptions for renewal printed out and sent to the supplier. He may also send him as a reminder the list of subscriptions cancelled during the year.

3. Invoices

Invoices are entered in the base as they arrive and passed to the various persons in charge, who decide whether they should be paid. A very simple transaction based on the periodical title key displays what has already been paid for that subscription, and to whom. The person in charge adds, if necessary the order number and details on the payment, i.e. volume and year, and then passes the invoice to the staff member responsible for making payments. The amount paid on each subscription allows the following year's budget to be calculated. During the payment operation, the various funds are debited and the subtotals and totals checked by the system, and the payment orders printed out are passed to the accounts department.

Renewal notices, which sometimes act as invoices, are checked in the same way, but before being entered so as to avoid unnecessary work.

B. Checking-in issues

This operaiotn, on which good management of a periodicals service depends, is facilitated by the fact that the operator does not have to put the issues in order before starting work, has several access routes to the titles sought, and need type only a few letters to record an issue, or else declare it missing, i.e. subject to claim. The next number anticipated is calculated as checking-in is done, and thus takes account of delays in publication and changes in frequency. The parameters calculated by the system are easy to correct individually. Since files are updated immediately, one can find out from any terminal the complete holdings for any given title, up to the last issue received, or whether a missing number has been claimed.

Checking-in is carried out as follows:

1) Title search: the operator has several access routes available: ISSN⁺, title-key, title if a single word, which may also be abbreviated, or order number or number of bibliographical record.

E.g., "The Economist" can be accessed by "00130613" or "ECO" or "ECONOMIST", or else by B64675 (order number) or IUE4978 (record number).

2) Title identification: The system answers the operator by displaying either the bibliographical record, plus internal number, frequency, country and language, where there is only one title under the key entered, or else a number of elements that generally suffice to identify the title: record number, country, frequency and author key, where there are several titles under the key. In the latter case the operator chooses one of the titles displayed and is given the complete record as in the first case, allowing a well-founded decision whether this is really the title sought.

⁺ ISSN: International Standard Serial Number.

3) Checking-in: routine arrival. Once the title is identified, the system displays the last issue received and the one expected, i.e. the next number calculated from the frequency and the parameters from the last issue received (date and/or number, volume, year).

If the issue expected is the one in hand, the operator may correct the issue identification parameters and add a note (pagination, anomalies, double issue, etc.). If it is a combined issue, the operator then enters the various numbers in succession, and the system creates a link between them. The screen also shows the operator shelving indications: the inventory number, shelf number, or room, which are then written on the issue.

If the issue being entered is not the one expected by a previous one, the system checks whether there are missing numbers for that title in the memory. If there is only one, it is immediately displayed, and if there are several, the operator is asked for details. Once the issue is found, the operator may correct the parameters as in the previous case. If there are no gaps, the system tells the operator so.

If the issue in hand is subsequent to the one expected, the system creates as many non-received numbers as the operator wishes, i.e. until the number created is the same as that in hand.

These three cases, number expected, previous number and subsequent number are the most frequent cases. Other cases arising may however also be controlled by the system:

- multiple subscriptions to the same title: in this case the system asks the operator how many copies he has received, and indicates various locations. If the operator has not received all the copies, he may thus select the priority destination. The other copies not recorded will be treated as missing by the system.

- subscription to a new title: if the issue to be checked-in corresponds to a title with an unchecked bibliographic record, the operator may enter the issue, but the system will check that it is passed to the cataloguing service for bibliographic control and indexing and indication of shelf number and section, etc.
- second subscription taken up during a year: when a second subscription is ordered, the librarian defines the first future issue due on the new subscription by reference to the number expected on the first subscription. When the number expected on the first subscription is the same as the first number in the second, control of the second subscription is integrated with that of the first, and the procedure becomes the same as for multiple subscriptions to the same title (see above).
- cancelled subscriptions: the system controls subscriptions cancelled effective with a particular issue in the same way. Where the number expected on the subscription is the same as that from which the subscription is to be cancelled, the system advises the operator that the issue received is the last one on the subscription, and does not create a new expected number.

4) Unexpected issue: routine insertion. If the operator receives an unexpected issue, e.g. a supplement, index, title page, cover etc., he may insert it between two numbers of his choice. All that need be done is to indicate the first of these two numbers and then give the parameters that identify the extra issue: date, volume number, year and note. A supplementary code enables these to be distinguished from ordinary issues and identify the type: index, supplement etc.

5) Correction of issues parameters: routine correction. Once the title is identified, the operator chooses the routine correction, states the number he wants, and corrects the parameters one by one. In this way either an issue received, or a missing, expected or claimed number can be corrected.

C. Claims

As in any manual system, claims are possible and correct only if checking-in has been carried out with exactitude.

The system allows three types of claim to be run:

- claim for the first issue of a subscription (subscription has not started)
- claim for a gap in a series (numbers 1 and 3 received, but 2 missing)
- claim for a late issue (no gaps, but expected issue overdue, or subscription has stopped coming)

No claim is sent until checked by the librarian, who may always reject a claim proposed by the system. The system need be supplied with very little information. The librarian may always choose when to make claims in accordance with his own work schedule. Titles may be reviewed for claiming at ease behind a desk; only the decision is made on line. The letters are printed out in batch mode so as not to slow down the system.

Description of claims operation:

1. Subscription not started. At the librarian's request and in accordance with preset time intervals, the system checks subscriptions on which nothing has yet been received, taking into consideration both the order date and supplier's remoteness. For each title, information is displayed to help the librarian make the decision: date of order, payment information, issue expected, supplier's name and address, and information received concerning the subscription.

The librarian indicates on-line which subscriptions are to be claimed. The system then prints out the appropriate claim forms. The claim date is added to the other order information in the acquisitions file.

2. Claiming a gap in a series. Claims are not made on checking-in, for three reasons:

- irregularities in postal deliveries may make the claim superfluous
- the decision to claim is not necessarily within the competence of the person doing the checking-in
- the need to consider a certain quantity of information might slow down checking-in of other issues.

The librarian asks for a list of gaps -- i.e. numbers declared missing by the operator during previous registration -- by frequency of publication, at the rate he wishes and in accordance with the time he has available. For each title, the system prints out the issues missing or already claimed, with date of claim, plus a number of elements to aid decision-making, such as order number, supplier's name, location, shelf number, data on invoices paid (payment date, amount, volume and year paid, payee).

The librarian then indicates on-line those subscriptions where the missing issues are to be claimed. As soon as the claim decision is made, the files are updated and the claim date added to each non-received issue. Claims may be made to either publisher or supplier. In the first case the system asks the librarian for the publisher's code; in the second case, it knows it already and does not ask anything.

3. Claims for delayed issues. With no gaps in the series, the normal time interval between arrivals has passed for the issue expected. At the librarian's request, the system lists the "expected issues" regarded as delayed, by frequency of publication, with the same information as in the foregoing case, plus information on the last issue received: parameters and date of receipt. The librarian indicates on-line which subscriptions to claim, as in case 2.

Claims for gaps and for delayed issues can be made simultaneously.

4. Correspondence. A certain quantity of information can be stored or transmitted on-line:

- brief record of supplier's reply
- reply to supplier's request for details or clarification (order slip sent again, with requested information)
- reply to supplier's offer by converting quotation request to effective order (slip reprinted with details on order, and budget updated)
- cancellation by librarian following repeated ignored claims

D. Updating of holdings

This updating operation allows a catalogue to be printed showing the holdings updated to the current year. The librarian asks for a list by frequency starting with the most frequent, of subscriptions where the kardex⁺ contains at least one issue received and one expected issue.

At the terminal, the librarian calls up each subscription number, and the system displays the contents of the corresponding kardex, i.e. in chronological order, the list of issues recorded, whether received, expected, missing or claimed. The librarian inputs the last number of the whole set to be deleted, and whether the missing numbers in the set should be kept in memory. The system likewise displays the former holding, which the librarian updates by adding the volume or year of which the issues are to be deleted.

For each subscription, the numbers withdrawn from the kardex file are printed. These lists containing, for each title, all the numbers making up a volume or year, are passed to the binding service, which uses them to collect the complete volumes from the shelves.

⁺ Kardex means the whole set of files containing bibliographical information on issues and on links with documents.

E. Binding

From the lists printed at catalogue update, it is easy to collect the complete volumes for binding. These specifications for each title (colour, covers to be kept, placement of index, etc.) are in memory, allowing binding slips to be printed out for each volume. The departure of the volumes is controlled by the system as a loan, and one can therefore find out at any time when a volume is at the bindery and what date it is due back. The binding budget is updated as the binding delivery is made and the invoices paid.

Preparation of a shipment for binding: the operator inputs into terminal the binder's code and the inventory number of each volume (which is linked to the precise description of the volume, e.g.: volume I, 1982). If the model already exists in the base, the system displays the specifications and the operator may add a note giving details if necessary. If the information does not exist, he creates it. Where the volume needs to be divided into several physical units, the operator asks the system for another inventory number, and adds the appropriate description: volume, year, part, etc. As the binding shipment is made up, the system accounts for the volumes and updates the budget. If there is no more money, the operator is informed.

For each volume, the operator indicates the date due back, and prints out an order to the binder showing all specifications.

Return of volumes: having checked the shipment returned from the bindery, the operator records its return by inputting the inventory numbers into the system. The loan is thus cancelled and the volumes can be labelled.

Payment of invoices: As invoices are paid, the budget assigned to each bindery is debited and the number of volumes paid is accounted for.

F. Inventory

Each volume is given an inventory number either at the beginning of its publication or at the date of binding. This number appears on each physical unit, and is readable by light pen so that loans can be made with no possibility of error. As volumes are labelled, they are accounted for by the system (new volumes or relabelled volumes), so that the growth in number of the library's volumes can be controlled.

Lists are printed out each year at the taking of inventory. For each list the parameters of the set to be checked are indicated (starting and ending points in shelves, room, etc.). The list is drawn up in the same order as the titles on the shelves, and for each title the system indicates, along with the bibliographical record, the volumes received and those absent (on loan, being bound, in another room). The collection can thus be very rapidly controlled and the date base updated, and volumes that have actually disappeared indicated.

G. Loans

The loan operation consists in inputting into the base the reader's identification number and the volume's inventory number, either by keying in on a terminal or reading with a light pen. The date due back is also input. Documents may be excluded from loan or reserved for another reader, in which case the system refuses to lend them. It is also possible to reserve a volume already on loan. One can find out at any time who has borrowed a work, or draw up a list of works borrowed by a reader. The system also accounts for the number of volumes returned from loan, and therefore due for shelving, and the number of times a work has been borrowed.

H. Interrogation

The main transaction for interrogating the base, available to all users, allows a search to be done on the basis of title key, author, subject or classification number, ISSN, order or inventory number, loan request number or else bibliographic record number or author heading. Once the record has been identified, the first screen page shows part of the bibliographical record, accompanied by the library's holdings up to the current

year and the location (room or section, shelf number etc.). Another screen page can show information on issues received during the current year (number, publication date, volume, year and note, date of receipt or claim); also available is information on volumes on loan (reader or binder, date checked-out, date due back, name of borrower) and on volumes borrowed by the library.

Documents in the library or on order may also be looked at (date of order and of claim if any, supplier's name, estimated price, any reports from bookshop, etc.). Alternatively, the bibliographical record may be examined in detail, with all links to other titles.

Other more specific transactions, reserved to staff, allow all information input into the base to be looked at.

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A METHODOLOGY FOR THE EVALUATION OF
SERIALS CONTROL SYSTEMS

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INTRODUCTION

Serials offer librarians a distinct professional challenge in respect to management and control. Over the years many attempts have been made to reduce this challenge by providing automation support for serials control (1,2,3). Many automated serials control systems have become available to libraries, and the difficulty of objectively evaluating the available alternatives (4) has increased correspondingly. In the evaluation process, questions of functionality; number of serials control records (data base size) accommodated; batch vs. on-line functions; speed and accuracy of use; security; private vs. shared systems; and cost are among those that must be answered before a system can be chosen for a particular library (5).

The purpose of this paper is to describe a methodology for evaluation of serials control systems that supports the system procurement process (6,7,8). The methodology enables a library to objectively and comprehensively evaluate systems in a straightforward and convenient manner. The methodology can be used in both formal and informal procurement processes, and it can be applied to any serials control system, although evaluation of on-line systems is its principal focus.

ELEMENTS OF THE METHODOLOGY

The evaluation methodology consists of a procedure and two data tables. The procedure is comprised of eight phases or steps, as follows:

1. Establishing objectives
2. Adjusting components of the methodology to agree with objectives
3. Selection of candidate systems for evaluation
4. Examination of system descriptive literature and documentation
5. Comparison of candidate systems with the functions and features table and with the checklist of data elements
6. On-site evaluation of candidate systems
7. System selection and acquisition
8. Post-installation evaluation

Each of these phases is described and its application discussed in the following sections. The two data tables are described below.

Figure 1 illustrates a portion of the table of functions and features. Note that a numerical weight is assigned to each feature and summed for each function in the table. Those functions which a library considers absolutely essential for serials control (absence of any such function is deemed a fatal flaw in the system under consideration) are also identified (by an "F") in the table. Inspection of Figure 1 shows that the function "Check-in", for example, is deemed critical to serials control, and that it has an overall weight of 73. The most important feature of check-in is "single keystroke entry of received-issue data" which has a weight of 10. In all, the table of functions and features covers 36 functional areas (see Table 1), and some 535 features. The functions deemed critical and the value of the numerical weights assigned to features (and thus to functions) may be altered to suit the particular needs of the organization for which the evaluation is conducted. The format of the table of functions and features is designed to be used to compare one system (columns headed "Candidate") with the base-line (columns headed "Desired").

In parallel with the table of functions and features just described, a checklist of **data elements** has been developed to enable the evaluator to determine the way each candidate system handles data essential to serials control. A checklist of 616 data elements that are necessary in a good serials control system has been prepared. A portion of the checklist is illustrated in Figure 2. Each data element is matched with one or more L.C. MARC data element identifiers where a correspondence exists. The right-most column of the checklist is for use in recording a "yes" (Y), a "no" (N), or a "combined with" (C) in answer to the question: Does the candidate system support this data element?

PHASE I - ESTABLISHING OBJECTIVES

The first phase of the methodology involves the establishment of concrete objectives which a candidate system must satisfy if it is to be selected for the library. This is probably the most difficult phase of the methodology. Nevertheless, meaningful system evaluation cannot be carried out in the absence of carefully developed objectives.

FUNCTION	FEATURES	DESIRED		CANDIDATE	
		Weight	Cumulative total	Weight	Cumulative total
CHECK-IN (F)	System supports published standards	3			
	System supports de facto standards	3			
	System collects statistics on all facets of system operation and use to support report production and library management	5			
		73	117		
	Automatic check-in supported:				
	- Single keystroke entry of received-issue data	10			
	- Multiple keystroke entry of received-issue data	2			
	- System records issue chronology, enumeration, receipt date, etc.	6			
	- System permits recording of receipt of multiple issues in a single transaction	6			
	- System permits recording of receipt of multiple copies in a single transaction	6			
	- System predicts next issue chronology, enumeration, receipt date, etc.	6			
	- System supports verification of received issue data by separate staff member	1			
	Semi-automatic check-in supported:				
	- Operator override of automatic feature	4			
	- System supports verification of received issue data by separate				

Figure 1. Illustration of a portion of the table of functions and features required of a serials control system. An "F" in the Function column of the table indicates a critical function.

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Table 1. Functional categories from the table of functions and features, their critical nature and the numerical weights assigned to each.

FUNCTION	CRITICAL?	WEIGHT
General		44
Check-in	Y	73
Routing (including custody, location, and discards)		57
Claims	Y	37
Search	Y	44
Retrieval	Y	46
Binding		50
Physical Preparation		20
Display, Staff	Y	64
Display, Patron		37
Local Printing		20
Item identification		23
Photocopy Support		17
Access Control		34
Overrides		16
Defaults		20
Audit trail		29
Messaging		16
Notices		23
Help		30
Date and Time		8
Reports		54
Report generator		39
Data Entry/Update	Y	58
Serials Union List		14
Maintenance		31
Acquisitions		22
Work Tracking		33
Training		25
Back-up & Recovery		27
Documentation		40
Software Portability		12
Telecommunications	Y	22
System Capacity	Y	20
Resilience Under Load		20
System Reliability	Y	35

DATA ELEMENT NAME	L.C. MARC DATA ELEMENT IDENTIFIER	CANDIDATE SYSTEM SUPPORTS?
* Deposit account location * Deposit account number * Dewey call number. <u>See</u>: Call number * Discontinued publication. <u>See</u>: Publication, discontinued * Discount percent. <u>See also</u>: Price, discount * Disposition date. <u>See</u>: Return date; Gift and exchange sent date * Document supplier code - Edition - Editor * Encumbrance date - Ending consecutive issue, report, part number - Ending date of publication (month/day) - Ending issue number - Ending issue number (no volume number) - Ending series number - Ending volume number - Ending year - Ending year published * Entity receiving item * Entity requesting item - Enumeration. <u>See</u>: first- to sixth-order designators under Holdings; Missing issue; Next expected issue; Photocopy record; Publication discontinued; Received issue * Evaluation date - Evaluator * Evaluation effective date, volume, issue - Evaluation, suitability code - Evaluation, nonsuitability reason - Evaluation notes. <u>See</u>: Note, evaluation - Exchange. <u>See also</u>: Publisher; Source - Exchange address, name - Exchange address, subdivision - Exchange address, street address	250;773(b) 100(e);570 008(11-14);[362(a)] [362(a)] [362(a)]	

Figure 2. Portion of the data element checklist developed for evaluation of serials control systems.

An overall statement of objectives must be developed first. Such a statement might have the following form and content:

Automation support for serials control (check-in, claiming, routing, binding, management data and reporting) installed and in routine operation in the library by 1985 January 31, so as to eliminate (by 1985 May 1) the processing backlog, and to reduce total staff-time requirements relative to that needed for current serials processing by 10% by 1985 July 1.

A statement of objectives must be specific and quantifiable in terms of the fundamental questions: why, what, where, when, how, how much, and who.

Once an overall statement of objectives has been achieved, specific subobjectives must be established. These will include standards and specifications that must be met by the chosen serials control system. Assistance in establishing objectives can be obtained by reference to books and articles on project planning and management.

PHASE II - ADJUSTING COMPONENTS OF THE METHODOLOGY TO AGREE WITH OBJECTIVES

Two very important components of the methodology are the table of functions and features, and the checklist of data elements. Although these components have already been prepared by us, it is usually necessary to make some adjustments to render these components compatible with the objectives established in Phase 1 for the serials control system. This is the major task of Phase 2.

It is essential that the functions and features be reviewed for aptness and completeness with respect to system objectives previously established. This means that the library must be sure that all critical functions are included in the table, and that they are identified as critical from the outset. The numerical weights associated with each function and feature should also be reviewed to be sure they reflect the library's perception of the relative importance of the functions and features, as dictated by the objectives set in Phase 1. Finally, the library should review the data element checklist to be certain that all of the data elements important to the library are included in the list before beginning the actual evaluation work.

PHASE III - SELECTION OF CANDIDATE SYSTEMS FOR EVALUATION

Phase 3 of the methodology is concerned with selection of candidate systems for further evaluation. Systems that might serve as candidates for evaluation may be identified initially through a search of the literature. Here it will be found that many references describe systems that seem to be promising but which, on further examination, prove to be quite crude, rudimentary serials control systems. Nevertheless, it is important to develop a substantial list of systems for further investigation. There are more than 100 such systems today. We have identified 34 that provide on-line interactive capabilities. Given the data obtained by the library in reviewing current literature, it is usually easy to reduce the list of potential candidate systems to a more manageable set by eliminating those that do not support one or more functions critical to the library's operations, and/or those that do not have appropriate capacity characteristics. Care should be taken, however, not to eliminate systems from consideration prematurely. The purpose of this phase of the methodology is to eliminate those systems which obviously do not satisfy system objectives. Others will be eliminated in subsequent phases.

PHASE IV - EXAMINATION OF SYSTEM DESCRIPTIVE LITERATURE AND DOCUMENTATION

For those systems that are selected as candidates, the next phase of the methodology (Phase 4) involves a careful examination of system descriptive literature and system documentation (all levels). By means of such an examination, the library will be able to further reduce the list of candidate systems, since the documentation and literature will usually reveal system limitations and constraints that prevent it from satisfying the objectives established in Phase 1. The remainder of the candidate systems (which will usually not number more than three or four), may then be evaluated in detail.

Clues to look for in the published literature and descriptive literature include:

- does the system operate primarily in an on-line or a batch mode?
- does the system support such major functions as check

- in of received issues, claiming, and routing?
- does the system have good search and retrieval capabilities?
- is the system designed for humans or for computers (i.e., is it user friendly)?

These clues are to be used to identify patently obvious faults. There is no point in performing a detailed evaluation of a system that, from the outset, is clearly incapable of performing the basic major functions.

Examination of system documentation is also an essential part of this phase of the methodology, and will often render further evaluation of a system unnecessary. Things to look for in the documentation include:

- is documentation available?
- what documentation (e.g., user documentation, system documentation, program listings) is available?
- how easy is it to obtain the documentation?
- what is the quality of the documentation?
- when was the documentation last updated?
- how would the library obtain updated documentation on a routine basis?

Systems for which documentation is unavailable or unobtainable should probably be eliminated from further consideration, although elimination at this stage should not be categorical. Systems for which documentation is obtained should be retained as candidates unless there is strong evidence that the system will not satisfy the basic criteria against which it will be evaluated.

PHASE V - COMPARISON OF CANDIDATE SYSTEMS WITH THE FUNCTIONS AND FEATURES TABLE AND WITH THE CHECKLIST OF DATA ELEMENTS

Phase 5 marks the start of detailed evaluation of candidate systems. The candidate system is evaluated with respect to each feature listed in the table of functions and features through careful examination of the descriptive literature and documentation obtained in Phase 4. A weight in the range 0 to n is assigned to the candidate system for each feature in the table (where n is the maximum weight, either positive or negative, of a feature in the "Desired" column; refer to Figure 1). A negative weight should be assigned to a feature of a candidate system when its

implementation of the feature actually detracts from serials control work.

It is usually best to carry out this phase of the methodology in two stages. First, use the table of functions and features as a guide to examination of the documentation for each candidate system. Make notes about features that are especially good aspects of the candidate system, about weaknesses of a function or feature, and about particularly poor aspects of the system. Do not attempt to assign numerical scores in this first stage.

Once the entire table of functions and features has been applied to a candidate system, repeat the process and assign numerical weights to each feature in the table that reflect the implementation of that feature in the candidate system. Sum the feature weights for each function, but do not total the function weights at this time.

In parallel with the application of the table of functions and features just described, the checklist of data elements must be employed to determine the way each candidate system handles data essential to serials control. The literature and documentation for each candidate system are searched to locate data elements that correspond with those in the checklist. Once the checklist of data elements has been compared with each candidate system, the number of data elements supported (Ys), not supported (Ns), or supported in combinations (Cs) must be tabulated.

Phase 5 is complete when all candidate systems have been compared with the table of functions and features and with the checklist of data elements, and a residual list of candidates is available for Phase 6.

PHASE VI - ON-SITE EVALUATION OF CANDIDATE SYSTEMS

The importance of the earlier phases of the methodology becomes apparent when one contemplates the cost of conducting on-site evaluations. On-site evaluations are absolutely essential, for there is no other way to experience the manner in which a system actually behaves, or the way in which it is used in an operational environment. Existing user sites are preferred to vendor sites, especially when the latter involve only a demonstration sys-

tem. The table of functions and features and the data element checklist are used as the basis for these on-site evaluations.

The site visit should be planned so that no more than one 8-hour day will be needed to thoroughly examine the system. The initial on-site activity should be a discussion with staff of the source organization concerning the current status of the system and any plans for its enhancement. This information will relate to such things as operational performance and future support of the system by the source organization. The functions and features table supports capture of this information.

The next step is to observe a live demonstration of the system during regular operational hours. Such a demonstration serves to identify both good and bad features of the system. There is no more effective way of identifying problem areas than to observe trained operators using the system in an operational mode.

The third step in on-site evaluation is to work through the functions and features table, feature by feature, while actually using the system to evaluate each feature it supports. A member of the source organization staff should be available during this process, to assist in exercising system features and to provide explanation as needed. During this process, the evaluator should not assign numerical weights, but should carefully annotate each feature so that weights can be assigned later. This process will take 3-4 hours. If the system supports a printer terminal or a printer attached to a terminal, copies of screen displays should be taken for future reference.

Finally, Phase 6 is completed by collecting performance data from the source organization, such as data base size, growth rate, check-in rate, staff performance data, and response time data. One should collect as much data as is reasonably available from the system. If not already in hand, a list of the data elements supported by the system should also be obtained, as should the internal structure of data base records.

Once the site visit is concluded, the data gathered should be used to update the table of functions and features with numerical weights. To each feature in the table, assign a numerical weight that reflects the implementation of that feature in the candidate

system. Sum the feature weights for each function, but do not total the function weights at this time.

The data element checklist developed in Phase 5 should be reviewed on-site to be sure all documentation has been correctly interpreted. Revise the Ys, Ns, and Cs previously entered in the "Candidate System Supports?" column (Figure 2) as necessary, and recompute the total of each.

Phase 6 is complete when all on-site evaluations have been carried out, and a completed table of functions and features (with assigned weights) and a completed checklist of data elements is available for each candidate system.

PHASE 7 - SYSTEM SELECTION AND ACQUISITION

This phase of the methodology makes use of the evaluation results obtained for each candidate system in Phase 6, to rank and to select the preferred system. Several ways of proceeding are possible. First, let us deal with the data element checklist. Recall that the Ys, Ns, and Cs were previously totaled for each candidate system. A final score is obtained by adding one-half the Cs to the Ys and then subtracting the Ns. The candidate systems may now be ranked according to their support of the data elements in the checklist.

As for the functions and features, the simplest way of proceeding is to consider all functions together, and to sum the feature weights for each function, and then to total the weights of all functions. That candidate system with the highest total weight is ranked first, and so on.

If the user-oriented functions are separated from the system-oriented functions, then the total weight for each of these functional groupings permits the candidate systems to be ranked separately in each grouping. A final overall ranking may be achieved through a linear combination of the weights of the two groupings. This permits the library to give greater emphasis to one grouping or another, as governed by overall objectives set out in Phase 1. Keep in mind that the "desired" weights must be similarly treated, otherwise comparison of candidate systems with the base-line will not be possible.

Still another approach to arriving at a final ranking of candidate systems is to separate the critical functions from the rest, and to develop total weights for these groupings. User-oriented and system-oriented functions may also be distinguished, giving a total of four groupings of functions and four scores for each candidate system. Data element scores may be included in the grouping considered most appropriate by the given library. Again, a final overall ranking may be achieved through a linear combination of the weights of the separate groupings.

The final step in the ranking process, using any of the above scoring techniques, is to develop ratios of candidate system scores to the base-line score. It will usually be found that such ratios fall in the range 0.60-0.70 for acceptable systems. Table 2 summarizes the application of Phase 7 to the evaluation of one serials control system.

Since each candidate system is independently compared with the table of functions and features, serials control system evaluation does not yield a relative ranking as is so often the case with other evaluation methodologies, but gives an absolute ranking relative to the base-line. Therefore, one can evaluate a single system, including one's own, quite effectively.

Because the purpose of the evaluation process has been to identify a system that could be procured for use within the evaluator's organization, the final step is to negotiate with the source organization for acquisition of the system. Although it is beyond the scope of this paper to detail what such negotiations should involve, several important factors can be identified.

- by whom and how will the system be improved and re-fined during the coming months and years?
- who will be responsible for implementing system enhancements?
- who will be responsible for system maintenance (hardware and software), and how and by whom will maintenance be performed?
- how and by whom will the system be installed?
- what training is provided and where, how and by whom will it be performed; what about on-going training requirements?
- what assistance is available for data file conversion (either from manual or computer-based files)?
- how much does the system cost (initial investment; on-going costs for operation and maintenance; continu-

Table 2. Summary of evaluation scores for one on-line serials control system.

FUNCTION	CRITICAL?	--WEIGHT--	
		MAX.	SYS.
General		44	20
Check-in	F	73	50
Routing (including custody, location, and discards)		57	31
Claims	F	37	0
Search	F	44	22
Retrieval	F	46	27
Binding		50	14
Physical Preparation		20	8
Display, Staff	F	64	43
Display, Patron		37	12
Local Printing		20	13
Item Identification		23	8
Photocopy Support		17	5
Access Control	F	34	25
Overrides		16	7
Defaults		20	11
Audit Trail		29	10
Messaging		16	0
Notices		23	0
Help		30	6
Date and Time		8	-3
Reports		54	10
Report Generator		39	0
Data Entry/Update	F	58	25
Serials Union List		14	10
Maintenance		31	17
Acquisitions		22	15
Work Tracking		33	0
Training		25	18
Back-up & Recovery		27	25
Documentation		40	31
Software Portability		12	0
Telecommunications	F	22	12
System Capacity	F	20	18
Resilience Under Load		20	14
System Reliability	F	35	21
TOTALS*		1160	525

* Ratio of candidate system (SYS.) score to base-line (MAX.) score is 0.45.

- ing payments to the vendor; cost of enhancements; etc.)?
- what happens when the system does not perform as advertised?
- what about obsolescence and future replacement?

Other factors to be considered include incorporation of the evaluation into the final contract; specific provisions for library/vendor participation in Phase 8; and provisions for action by both parties when the results of Phase 8 are available.

The reader will have noted that cost has not made its appearance in this evaluation methodology before now. This is as it should be. Cost is not just a matter of purchase price, or of cost of operation. Actual system cost is the total of all costs, including personnel, space, electrical power, telecommunications, air conditioning, maintenance, and more. It is thus not possible to talk in meaningful terms about cost before the first six phases of the methodology have been completed. In Phase 7, it is possible to determine value, not simply cost, and to use this as a criterion for final system selection. But even if cost forces a library to abandon its first choice for a system, and to enter into negotiations with the second-choice source, having completed the first six phases makes it possible to know precisely what features will be given up if such a decision must be made. This is one of the fundamental advantages of the methodology described in this paper.

PHASE 8 - POST-INSTALLATION EVALUATION

The final phase of the methodology is to conduct a post-installation evaluation. All materials developed in the course of the evaluation of candidate systems through the first seven phases should be carefully organized, labeled and preserved for use in this final phase.

After the system has been installed and in operation for perhaps six months, the library should apply the methodology to this one system afresh. Review and revise objectives, review the literature, fine tune the functions and features table and the data element checklist, review system documentation (now presumably updated relative to the original evaluation), score the system, and compare the score(s) with the base-line score. The results of

this evaluation (i.e., the system/base-line ratio) should not differ more than one or two points from the ratio obtained in the original evaluation. If the ratio is significantly lower, system performance levels lower than desired are indicated, and measures should be instituted to identify and correct the problem(s). If the ratio is significantly higher, this may mean that a better choice was made than originally appeared to be the case, or else the library's attitude toward the system has become more tolerant. This latter is to be guarded against. People can adapt to almost anything, but that does not mean they should. Perhaps procedures need to be modified or refined; perhaps the system has not been well-integrated into operations; or perhaps the system has a flaw that requires a vendor solution. The library should use the post-installation evaluation as a means of identifying problems irrespective of their cause, and then develop solutions of those problems.

REFERENCES CITED

1. Tedd, L. A. An introduction to computer-based library systems. London: Hayden; 1977: Chapter 8, pp. 111-125.
2. Spyers-Duran, P.; Gore, D., (eds.). Management problems in serials work. Westport, Connecticut: Greenwood Press; 1974: 145 pp.
3. Potter, W. G.; Sirkin, A. F. Serials automation for acquisitions and inventory control. Chicago: American Library Association; 1981: 181 pp.
4. Lancaster, F. W.; McCutcheon, D. Some achievements and limitations of quantitative procedures applied to the evaluation of library services. In: Chen, C.-C., (ed.). Quantitative measurement and dynamic library service. Phoenix: Oryx Press; 1978: pp. 12-14.
5. Gellatly, P. (ed.). The Management of Serials Automation: Current Technology and Strategies for Future Planning. New York: Haworth Press; 1982: 293 pp.
6. Dologite, D. G. Evaluating packaged software - Avoiding the Landmines. Data Management 20(1): 20-26.
7. Rush, J. E.; Tannehill, R. S., Jr. A Methodology for the Evaluation of Serials Control Systems. In: A. E. Petrarca, C. I. Taylor, and R. S. Kohn (eds.). Proceedings of the ASIS Annual Meeting, Vol. 19, Washington, D.C.: American Society for Information Science; 1982: 254-258.)
8. James E. Rush Associates. Library Systems Evaluation Guide: Serials Control (Vol. 1). Powell, Ohio: James E. Rush Associates, Inc.; 1983: 194 pp.



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ETUDE SUR LE TRAITEMENT DES PUBLICATIONS
EN SERIE PAR LES CENTRES ISDS ET LES
AGENCES BIBLIOGRAPHIQUES NATIONALES

resumé par Christine GIRARD
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ETUDE SUR LE TRAITEMENT DES PUBLICATIONS EN SERIE
PAR LES CENTRES ISDS et LES AGENCES BIBLIOGRAPHIQUES
NATIONALES

Cette étude a été commencée en 1977 et publiée en Mai 1980.

En 1977 la nouvelle version de l'ISBD (S) vient de paraître. L'IFLA insiste sur le rôle des agences bibliographiques nationales chargées de l'établissement des notices normalisées selon les ISBD. Parallèlement l'ISDS se développe et définit les éléments de la notice d'identification ISDS établie par les Centres nationaux conjointement à chaque attribution d'ISSN.

La plupart des Agences bibliographiques sont intégrées dans les Bibliothèques nationales et les Centres nationaux qui se créent les rejoignent le plus souvent dans la même structure. N'est-il pas alors illogique et coûteux pour les Bibliothèques nationales de devoir pourvoir à un double traitement bibliographique et un double enregistrement informatique des publications en série d'une part pour l'ISDS et d'autre part pour l'ISBD (S) ?

Pour examiner ce problème les responsables de l'étude ont envoyé un questionnaire à un total de 47 pays (38 Centres ISDS et 9 qui étaient alors en pourparlers avec l'ISDS). Ce questionnaire comportait 2 parties, l'une destinée au CN l'autre à l'Agence bibliographique, et portait principalement sur les relations entre les 2 organismes. Le dépouillement de ces questionnaires, les visites aux CN et au CI et la consultation de nombreux documents ont permis de recueillir des informations précises, qui sont présentées en 5 chapitres :

- Chapitre 1 - Les sources de l'information bibliographique, et les bibliographies nationales
- Chapitre 2 - Implantation des CN ISDS
- Chapitre 3 - Fonctionnement des CN ISDS
- Chapitre 4 - Comparaison entre le traitement des publications effectué par les CN et les bibliographies nationales
- Chapitre 5 - Comparaison du rôle des CN et des agences bibliographiques

CHAPITRE 1 - Il recense les sources d'informations bibliographiques disponibles lors de la création d'un CN/ISDS en les évaluant par rapport au principe du CBU (Contrôle bibliographique universel)

Dépôt légal : 90% des pays disposent d'une réglementation assurant le dépôt légal ou fixant des conditions de dépôt liées au copyright textes citant unanimement périodiques ou publications en série

Bibliographie nationale : 90% des pays concernés possèdent une bibliographie nationale courante incluant sous une forme ou sous une autre les publications en série.

Dans presque tous les cas la Bibliothèque nationale reçoit le dépôt légal et c'est elle qui rédige la bibliographie nationale.

L'évaluation porte sur les délais, l'exhaustivité, l'efficacité :

- Délais

Les délais sont très variables : 0 à 6 mois pour le D.L.

Une semaine à 2 ans pour la parution de la bibliographie, les deux n'étant pas forcément cumulables dans la mesure où certains pays ayant un dépôt légal tardif ont recours à d'autres sources pour permettre une parution de la bibliographie dans des délais raisonnables.

- Exhaustivité ou sélection

Presque la moitié des pays procèdent à une sélection soit pour le D.L. soit pour la bibliographie nationale, soit cumulée.

- Efficacité

Sont évoqués les problèmes de contrôle du D.L., d'élimination très fréquente de certaines publications (publications officielles publications et rapports internes).

CHAPITRE 2 - Implantation des Centres ISDS

Ce chapitre est introduit par une présentation de la structure de l'ISDS et du réseau. Puis on examine l'environnement et le choix d'une implantation. Dans 74% des cas la structure d'accueil est l'agence bibliographique nationale. Dans 26% des cas la structure d'accueil est un grand centre de documentation. Les relations de travail entre l'agence bibliographique nationale et centre ISDS varient de la collaboration lointaine à l'organisation la plus intégrée. Dans la plupart des cas il y a collaboration entre l'Agence bibliographique et le CN = publication généralement d'abord traitée par l'agence bibliographique puis transmise au CN. En outre l'enquête montre bien que les pays où n'existe pas cette coordination souhaitent une évolution dans ce sens.

CHAPITRE 3 - Fonctionnement des Centres ISDS

Sont abordés les volumes de documents à traiter, les effectifs, le total des ISSN attribués par les CN qui fonctionnent depuis quelques années. On constate partout un manque de moyens, en particulier en personnel.

Outre une présentation de l'organisation générale du travail d'un Centre ce chapitre étudie de manière approfondie les relations avec les utilisateurs ; services d'analyse, catalogues collectifs, autres Centres, Centres de documentation services postaux, éditeurs. Les demandes sont partout en augmentation et l'effort de collaboration avec les éditeurs commence à porter ses fruits.

CHAPITRE 4 - Traitement des publications en série par les Centres ISDS et les bibliographies nationales, étude comparative

Ce chapitre examine le corpus des règles ISDS et les règles de catalogage suivies par les agences bibliographiques nationales. Une enquête a montré que celles-ci se divisent en 3 grands groupes :

- règles nationales et RAK
- AACR
- ISBD (S)

Chaque groupe est comparé avec l'ISDS. C'est l'ISBD (S) qui semble le plus compatible malgré des différences assez importantes. Le projet des AACR et de RAK de prendre prochainement en compte l'ISBD (S) permet donc une conclusion relativement optimiste.

De même sont étudiés les problèmes de compatibilité des formats pour les Centres ISDS et Agences bibliographiques automatisées. En particulier l'exemple des formats MARC Américain, Canadien et Britannique qui ne sont pas compatibles avec l'ISDS et obligent soit à une double saisie (cas du Royaume Uni) soit à un lourd programme de conversion (cas de la Library of Congress).

CHAPITRE 5 - Objectifs et rôles respectifs des CN et des Agences bibliographiques nationales.

Les éléments recueillis montrent la complémentarité des rôles des Agences bibliographiques nationales et des Centres ISDS pour la collecte, la normalisation et la diffusion des publications en série.

La conclusion insiste sur cette complémentarité des deux systèmes, et évoque une possibilité de format plus simple qui faciliterait la compatibilité entre les différents systèmes.